

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (*Currently Amended*) A method of operating an implantable cardiac stimulator to perform cardioverting, the cardiac stimulator having output means for delivering electrical stimulation of a predetermined polarity, amplitude, shape and duration, the method comprising:

CI sensing the onset of tachycardia;

applying pulses of biphasic pacing stimulation at a first intensity level selected from the group consisting of at the diastolic depolarization threshold, below the diastolic depolarization threshold or above the diastolic depolarization threshold, wherein each pulse of biphasic pacing stimulation comprises:

a first stimulation phase with a first phase polarity, a first phase amplitude, a first phase shape and a first phase duration; and

a second stimulation phase with a second phase polarity, a second phase amplitude, a second phase shape and a second phase duration; and

determining whether pacing capture has occurred;

wherein the first phase polarity is positive and the first phase amplitude is at a maximum subthreshold amplitude.

2. (*Previously Amended*) The method of operating an implantable cardiac stimulator as in claim 1, wherein it is determined that capture has not occurred, further comprising:
increasing the stimulation intensity level by predefined increments until capture occurs.

3. (*Cancelled*)

4. (*Previously Amended*) The method of operating an implantable cardiac stimulator as in claim 1, wherein it is determined that capture has occurred, further comprising:
halting biphasic pacing stimulation.

5-14. (*Cancelled*)

15. (*Previously Amended*) The method of operating an implantable cardiac stimulator as in claim 1, wherein the first phase duration is at least as long as the second phase duration.

16-29. (*Cancelled*)

30. (*Previously Presented*) The method of operating an implantable cardiac stimulator as in claim 1, wherein the first stimulation phase is initiated greater than 200 milliseconds

after completion of a cardiac beating cycle.

31. (Cancelled)

32. (Currently Amended) An implantable cardiac stimulator to perform cardioverting, the cardiac stimulator comprising:

sensing means for sensing the onset of tachycardia;

C¹ output means for delivering, in response to the sensing means, electrical stimulation of a predetermined polarity, amplitude, shape and duration to cause application of pulses of biphasic pacing stimulation at a first intensity level selected from the group consisting of: at the diastolic depolarization threshold, below the diastolic depolarization threshold, and above the diastolic depolarization threshold; and

means for determining whether capture has occurred;

wherein each pulse of biphasic pacing stimulation comprises:

a first stimulation phase with a first phase polarity, a first phase amplitude, a first phase shape and a first phase duration; and

a second stimulation phase with a second phase polarity, a second phase amplitude, a second phase shape and a second phase duration;

wherein the first phase polarity is positive and the first phase amplitude is at a maximum subthreshold amplitude.

33. (*Previously Presented*) The cardiac stimulator as in claim 32, wherein in the event that the means for determining determines that capture has not occurred, the output means increases the stimulation intensity level by predefined increments until capture occurs.

C 34. (*Previously Presented*) The cardiac stimulator as in claim 32, wherein in the event that the means for determining determines that capture has occurred, the output means halts biphasic stimulation.

35. (*Cancelled*)

36. (*Previously Presented*) The cardiac stimulator as in claim 32, wherein the first phase duration is at least as long as the second phase duration.

37. (*Currently Amended*) An implantable cardiac stimulator device comprising:

plural electrodes;

sensing circuitry connected to the plural electrodes and adapted to sense the onset of tachycardia;

detecting circuitry connected to the sensing circuitry and adapted to detect whether pacing capture has occurred; and

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pulse generating circuitry connected to the plural electrodes and adapted to generate, in response to the sensing circuitry, electrical pulses of a predetermined polarity, amplitude, shape and duration to cause application of pulses of biphasic pacing stimulation at a first intensity level selected from the group consisting of: at the diastolic depolarization threshold, below the diastolic depolarization threshold, and above the diastolic depolarization threshold; and

wherein each pulse of biphasic pacing stimulation comprises:

a first stimulation phase with a first phase polarity, a first phase amplitude, a first phase shape and a first phase duration; and

a second stimulation phase with a second phase polarity, a second phase amplitude, a second phase shape and a second phase duration;

wherein the first phase polarity is positive and the first phase amplitude is at a maximum subthreshold amplitude.

38. *(Previously Presented)* The implantable cardiac stimulator device as in claim 37, wherein, in the event that the detecting circuitry determines that capture has not occurred, the pulse generating circuitry increases the stimulation intensity level by predefined increments until capture occurs.

C¹ 39. (*Previously Presented*) The implantable cardiac stimulator device as in claim 37, wherein, in the event that the detecting circuitry determines that capture has occurred, the pulse generating circuitry halts biphasic pacing stimulation.
